

## REMARKS

### *The Pending Claims*

Claims 1-9 and 11-18 are currently pending. Claims 1-4 and 17 are directed to a preparation process for a first aqueous dispersion comprising an *ex-situ* photosensitive silver halide and a substantially light-insensitive silver salt of an organic carboxylic acid. Claims 5-6 are directed to a first aqueous dispersion. Claim 7 is directed to a process for preparing a layer of a photo-addressable thermally developable element of a photothermographic recording material. Claims 8, 9 and 18 are directed to a preparation process for a fourth aqueous dispersion comprising a second *in-situ* photosensitive silver halide and a substantially light-insensitive silver salt of an organic carboxylic acid. Claims 11-12 are directed to a fourth aqueous dispersion. Claim 13 is directed to a process for preparing a layer of a photo-addressable thermally developable element of a photothermographic material. Claims 14 and 15 are each directed to a photothermographic recording material. Claims 16 is directed to a photothermographic recording material comprising a photoaddressable thermally developable element.

### *The Amendments to the Claims*

Claim 10 has been cancelled. Claim 5 has been amended to depend from claim 4. The claims have been amended to point out more particularly and claim more distinctly the subject matter of the invention. In particular, Claims 5-8 and 11-16 have been amended to recite an aliphatic carboxylic acid with greater than 12 carbon atoms. Support for the claim amendments can be found at, *e.g.*, page 3, line 18; page 4, lines 7-8; page 7, lines 16-18, and original claim 10 (now cancelled) of the Application. No new matter has been added by way of these amendments.

### *Summary of Office Action*

The Office Action rejects claims 5-6, 14 and 16 under 35 U.S.C. § 102(b) as allegedly anticipated by, or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Gilliams et al. (*i.e.*, U.S. Patent 5,891,616) (hereinafter “Gilliams”). Further, claims 8, 10, 11, 15 and 18 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Gilliams. The Office

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Action also rejects claims 9, 12 and 13 under 35 U.S.C. § 103(a) as allegedly unpatentable over Gilliams. Finally, Applicants acknowledge, with appreciation, the indication that claims 1-4 and 7 and 17 are allowable.

*Discussion of the Anticipation and Obviousness Rejections*

The anticipation and obviousness rejections are believed to be moot inasmuch as the cited reference (i.e., Gilliams) neither discloses nor reasonably suggests the present inventive aqueous dispersions as recited in the amended claims.

i. Claims 5-6, 14, and 16

The Office, in support of its position, contends that Gilliams discloses an aqueous dispersion containing a silver salt of an aliphatic carboxylic acid and silver halide. (Office Action, page 2). Further, the Office alleges that Gilliams discloses the use of sodium hydroxide to provide an aqueous solution with pH of 8.7, and the formation of silver halide *in-situ* using the conversion of silver behenate. (Office Action, page 2). Citing *In re Thorpe*, 777 F.2d 695, 698 (Fed. Cir. 1985), the Office contends that the patentability of a product claimed in the form of a product-by-process claim does not depend on its method of production (Office Action, page 3). The Office points, in particular, to Example 1 of Gilliams, alleging that it discloses the use of "sodium hydroxide to provide the aqueous solution to pH of 8.7" (Office Action, page 2). As well, Example 2 of Gilliams is cited as disclosing the formation of silver halide *in-situ* using the conversion of silver behenate. (Office Action, page 2).

The Office, therefore, concludes that the aqueous solution of Gilliams is identical to that claimed in the present application, including the pH, except that the composition of the claimed invention contains *ex-situ* silver halide whereas Gilliams is limited to a solution with *in-situ* silver halide. (Office Action, pages 2-3) The Office is incorrect.

Gilliams, in fact, teaches that a *sodium behenate solution* is first prepared has a pH of 8.7. The pH of 8.7 is due to the strong alkalinity of sodium hydroxide, and the weakly acidic nature of behenic acid. Upon addition of silver nitrate, the pH will decrease strongly as the silver behenate produced goes into dispersion, thereby reducing the pH to well below 8.0. The products of the silver behenate preparation process disclosed in Example 1 of Gilliams

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are also *sodium* nitrate, which is neutral, being a salt of a strong acid and a strong base, or, in the case of silver behenate, insoluble. As such, there are *no species present* in the Gilliams silver behenate dispersion, which can render the resulting silver behenate dispersion *anything other than neutral* (*i.e.*, a pH of 7.0).

Furthermore, Applicants note the presence of a substantial amount of sodium ions, due to the preparation of silver behenate from sodium behenate in Gilliams without a subsequent desalting step (*compare with, e.g.*, Application, page 18, lines 24-28). Thus, the Gilliams composition has a substantial amount of soluble metal ions (*i.e.*, sodium ions). Further, Gilliams does not provide any silver behenate dispersion, or any synthetic scheme for obtaining a silver behenate dispersion that is substantially free of a water-soluble metal or ammonium salt of an aliphatic carboxylic acid with at least 12 carbon atoms as recited in the pending claims. As recited in the claims, the organic silver salt is one with at least 12 carbon atoms. Since the first aqueous dispersion produced according to the process according to claim 4 is *substantially free of a water-soluble metal or ammonium salt of an aliphatic carboxylic acid with at least 12 carbon atoms* (*see* claim 1), a sodium salt of a water-soluble metal or ammonium salt of an aliphatic carboxylic acid can only be present in very small quantities. Gilliams does not teach or fairly suggest an aqueous dispersion substantially free of a water-soluble metal or ammonium salt of an aliphatic carboxylic acid with at least 12 carbon atoms.

Furthermore, the Office has mistakenly interpreted the process of Example 2 in Gilliams. In particular, Example 2 does not disclose "the formation of silver halide *in-situ* using the conversion of silver behenate" as alleged by the Office (Office Action, page 2). Rather, the addition of potassium bromide in Example 2 results in the formation of silver halide with *excess silver ions* that are present in the dispersion.

The practical effect of this difference in composition between the Gilliams dispersion and the present invention is evident in INVENTION EXAMPLES 1 and 2 of the present application (exemplifying first aqueous dispersions), and COMPARATIVE EXAMPLES 1 and 2 of the present application (representing first aqueous dispersions outside the scope of the present claims). In particular, the first aqueous dispersion of the present invention (as exemplified in INVENTION EXAMPLES 1 and 2) differ from those outside the scope of the claims with respect to stability in the dark of their photosensitivity and D<sub>min</sub> upon exposure

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and thermal development as shown in Table 1. Furthermore, the inventive first aqueous dispersions also differed in their photothermographic properties as shown by comparing the results for INVENTION EXAMPLES 1 and 2 and INVENTION EXAMPLES 3 to 6 with that of COMPARATIVE EXAMPLE 1 (*see* Application at, *e.g.*, page 21, line 1 to page 22, line 36).

Therefore, as discussed above, the rejection of claims 5-6 and 14 under 35 U.S.C. § 102(b), or, in the alternative, under 35 U.S.C. § 103(a), over Gilliams is moot, as Gilliams cannot be said to teach or reasonably suggest the invention as recited in the amended claims.

ii. Claims 8, 10, 11, 15 and 18

The Office alleges that Gilliam discloses, in Examples 1 and 2, the preparation of silver behenate and *in-situ* silver halide by first forming an aqueous solution having a pH of 8.7 using sodium hydroxide to control the pH thereof and then using conversion process by adding potassium bromide drop-wise. Thus, according to the Office, Gilliams teaches the process and the aqueous composition containing *in-situ* silver halide and light-insensitive silver salt of an organic acid.

For the reasons as set forth in section i., *supra*, with respect to rejections of claims 5-6, 14 and 16 over Gilliams, we believe that the rejection of claims 8, 10, 11, 15 and 18 over Gilliams is similarly moot, and should be withdrawn.

iii. Claims 9, 12 and 13

Assuming, *arguendo*, that the use of a basic solution, such as ammonia, to regulate pH has been common in the art, as contended by the Office, the failure of Gilliams to teach, or reasonably suggest, the regulation of the pH of the silver behenate emulsion after synthesis, and further in view of the difference in properties of the compositions of the claimed invention as exemplified by INVENTION EXAMPLES 1 to 6 as compared to COMPARATIVE EXAMPLES 1 and 2, the rejections of claims 9, 12 and 13 under 35 U.S.C. § 103 (a) over Gilliams are inappropriate.

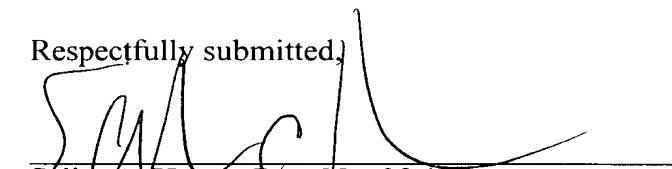
In view of the foregoing, Gilliams cannot be said to teach or fairly suggest claims 5, 6, 8, 9, 11-16 and 18 as amended. Accordingly, the anticipation and obviousness rejections should be withdrawn and the application allowed.

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*Conclusion*

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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